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(54) Abstract Title

Independent satellite-based communications systems sharing common frequency spectrum and method of operation thereof

(57) Multiple, different, independent constellations (10, 20) of satellites (2, 21-23) share a portion of a common frequency spectrum such as a single carrier frequency. The satellites' antennas (11) may be either multi-beam or omnidirectional, while those of earth stations (13, 14) are directional. When interference occurs between communications of a satellite (31) of a first constellation (10) and a satellite (41) of a second constellation (20), any of several interference-mitigation options may be employed, such as the first satellite (31) handing off communications to a second satellite (32) of the same constellation (10), or temporarily suspending communications. The remedial action may occur in response to either predicted or detected interference.

